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10/716,323	11/18/2003	Chien-Hsiung Lee	1970-4	5244

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EXAMINER

COCKS, JOSIAH C

ART UNIT

PAPER NUMBER

3749

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/716,323

Applicant(s)

LEE ET AL.

Examiner

Josiah Cocks

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. Receipt of applicant's amendment filed 2/07/2005 is acknowledged.
2. Applicant's amendment cancelled previously presented claims 1-20 and added new claims 21-40, including independent claims 21 and 35. Accompanying this amendment applicant included arguments stating that

“[t]he functional language contained within the original claims is now properly recited herein in view of ‘means-plus-function’ terminology.” (response, p. 10).

It is not clear by this statement if applicant intends to invoke 112<sup>th</sup>, 6<sup>th</sup> paragraph. Applicant includes claims that recite, for example;

“first pipeline means...for transferring...,” “heat-absorbing board means....for absorbing....,” “second pipeline means...for transferring...” (see claim 21), and

“air inlet means...for conducting....,” and “air outlet means...for conducting...” (see claim 35).

35 U.S.C. § 112, 6<sup>th</sup> paragraph states:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

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MPEP § 2181 recites the analysis necessary to determine if 35 U.S. 112, 6<sup>th</sup> paragraph is invoked. This section states:

A claim limitation will be interpreted to invoke 35 U.S.C. 112, sixth paragraph, if it meets the following 3-prong analysis:

- (A) the claim limitations must use the phrase "means for" or "step for";
- (B) the "means for" or "step for" must be modified by functional language; and
- (C) the phrase "means for" or "step for" must not be modified by sufficient structure, material or acts for achieving the specified function.

Part (C) requires that the "means for" phrase must not be modified by sufficient structure, material or act for achieving the specified function. If applicant intends to invoke 112<sup>th</sup>, 6<sup>th</sup> paragraph it appears that applicant's uses of the "means for" phrases appear to be modified by structure (e.g. first pipeline means, heat-absorbing board means, second pipeline means, air inlet means and air outlet means), which would prohibit invocation of 35 U.S.C 112, 6<sup>th</sup> paragraph. Applicant should review all instances in the claims where structure has been identified in a "means-plus-function" format for compliance with the requirements of the 3-prong analysis above if applicant intends to invoke 35 U.S.C 112, 6<sup>th</sup> paragraph.

Where it is unclear if 35 U.S.C 112, 6<sup>th</sup> paragraph is intended to be invoked, the MPEP authorizes a rejection under 35 U.S.C. 112, 2<sup>nd</sup> paragraph. MPEP § 2181 states the following:

In the event that it is unclear whether the claim limitation falls within the scope of 35 U.S.C. 112, sixth paragraph, a rejection under 35 U.S.C. 112, second paragraph may be appropriate.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 21-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claims 21-40, as noted above, the scope of the claims are indefinite as is not clear if applicant intends to invoke 35 U.S.C 112, 6<sup>th</sup> paragraph. For the purpose of an examination on the merits, none of applicant's claims are considered to invoke 35 U.S.C 112, 6<sup>th</sup> paragraph.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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7. Claims 21, 22, 27-29, 31, 33-35, 37, 39, and 40, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,809,523 to Vandenberg ("Vandenberg") in view of U.S. Patent No. 4,448,039 to Hutchins ("Hutchins")

Vandenberg discloses in Figures 1-5 a passive energy saving system for a building similar to that described in applicant's claims 21, 22, 27-29, 31, 33-35, 37, 39, and 40. In particular, Vandenberg discloses a building (see Fig. 1), a solar collector (2) with a heat absorbing plate (see Fig. 1), a heat exchanger (12a, 12b, 12c) a first reservoir (22) including cooling water mounted in the roof of a house, a first pipeline (13) connecting the heat exchanger to the first reservoir, a heat accumulator (10) and a second pipeline (11) connecting the heat exchanger and the accumulator. Vandenberg also discloses an air circulation module with an air inlet, air outlet and a heat-exchanging pipe (see col. 10, lines 10-33). A solar energy collector assembly (2) is arranged to receive sunlight and heat and cold storage tanks (30) and hot water supply tanks (40) are arranged to provide hot water for circulation throughout the building (see col. 10, lines 35-52). The heat and cold storage tanks are shown as being located underground and are considered to be second reservoirs wherein a pump (14) circulates cold water from these reservoirs through the system including into first reservoir (22). The solar collector assembly also includes appropriate valving and by-pass line structure as recited in applicant's claims (see col. 12, line 1 through col. 13, lines 57) and

While Vandenberg discloses a heat accumulator (10), he possibly does not disclose that the heat accumulator is in the form of a heat-absorbing board that absorbs air heat in the building and is located below the heat exchanger that is located below the first reservoir.

Hutchins discloses a solar heating and cooling system in the same field of endeavor as Vandenberg. In Hutchinson, the system includes a solar collector (10) and is connected to a reservoir (37) with a heat exchanger assembly (20) arranged below the reservoir. A cooling evaporator (34) in the form of a board is located, at least partially, beneath the heat exchanger (20). This cooling evaporator functions to absorb heat by withdrawing heat from a desired area by using a fluid (see col. 7, lines 46-64) and is considered the heat-absorbing board recited in applicant's claims. Hutchins also shows appropriate valving and pipelines between the components of the solar collector (see Fig. 1 and col. 5, lines 55-65).

Therefore, in regard to claims 21, 22, 27-29, 31, 33-35, 37, 39, and 40, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the energy saving system of Vandenberg to incorporate the heat absorbing board/cooling evaporator of Hutchins desirably allows for the removal of heat from an area within the building and adding latent heat to the fluid within the evaporator that is usefully added to recovered heat within the latent heat solar heating and cooling system (see Hutchins, col. 5, lines 28-40).

8. Claims 23-26, 30, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandenberg in view of Hutchins as applied to claim 1 above, and further in view of U.S. Patent No. 5,400,607 to Cayce ("Cayce").

Vandenberg in view of Hutchins teach all the limitations of claims 23-26, 30, and 36, except for a cooling module positioned on a window of a building wherein the module includes a cooler, third pipeline, and a photo catalyst filter and an active carbon filter or an air circulation module with an air purifier.

Cayce discloses an air ventilation cooling system that includes an air-cooling and circulation module with a cooler and appropriate pipeline and valving structure (see Fig. 1). The module also includes the use of air purification means in the form of filters (14). The examiner considers that a person of ordinary skill in the art would reasonably select known filter types for the filters of Cayce, such as photo catalyst and active carbon filters, and therefore these filter types are not considered to patentably distinguish applicant's invention. In regard to the recitation that the cooling module is positioned on a window of the building, the examiner considers that since the system of Cayce is intended to receive outside air a person of ordinary skill in the art would reasonably select a location that receives a flow of outside air, such as a window. This limitation as to system location is considered simply a matter of obvious matter of design choice absent the showing of some new or unexpected results over the prior art of record.

Therefore, in regard to claims 23-26, 30, and 36, it would have been obvious to a person of ordinary skill in the art to modify the energy saving system of Vandenberg to incorporate the ventilation and cooling module of Cayce for the desirable purpose of providing a highly efficient system of supplying outside ventilation air cooling to buildings (see Cayce, col. 3, line 65 through col. 4, line 7).

9. Claims 32 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandenberg in view of Hutchins as applied to claims 31 and 37 above, and further in view of U.S. Patent No. 3,853,114 to Gaydos, Jr. ("Gaydos").

Vandenberg in view of Hutchins teaches all the limitations of claims 32 and 38 except for a plurality of helical coils connected to the heat absorbing plate.



Gaydos teaches a solar heat absorber analogous to that of Vandenberg wherein the absorber forms what the examiner considers a plate that includes helical coils (30) (see Fig. 1).

Therefore, in regard to claims 32 and 38, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the solar collector of Vandenberg to include the helical coils of Gaydos as the helical coils allow a greater amount of fluid to be present in the collector for heating at any given time (see Gaydos, col. 2, lines 41-45).

#### ***Response to Arguments***

10. Applicant's arguments filed 2/07/2005 have been fully considered but they are not persuasive. Applicant argues that the system of Vandenberg is not "passive" because of compressor-pump which functions to pump cold water from the lower storage tank to the upper storage tank. However, the examiner notes that this pump appears to be performing the same function as applicant's pump, which transfer water from the second reservoir to the first reservoir. Further, Vandenberg describes an objective of his inventive system to "provide such a system which is also hermetically sealed, has not moving parts such as motors, pumps, controls, valves, or instrumentation, is self regulating, and is essentially maintenance-free." (Vandenberg, col. 2, lines 28-32). The examiner that the system is therefore reasonably considered a "passive" system as claimed by applicant.

Applicant also argues that the system of Vandenberg is used only to add heat into a building. However, Vandenberg clearly describes his system as being both a cooling and heating system (see Vandenberg, at least col. 1, lines 7-10 and col. 2, lines 58-60).

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It is noted that applicant does not point to any structure in applicant's claims that is not present in the Vandenberg, or any of the references relied upon by the examiner. Applicant merely argues that the combination of Vandenberg and Hutchins cannot not work (see response, p. 10). Implicitly, it appears applicant is arguing that the structure in Hutchins that the examiner is relying upon to modify Vandenberg could not be bodily incorporated into Vandenberg. In response, the examiner notes the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). As noted in the rejections above, the examiner considers that the prior art relied upon by the examiner would suggest to a person of ordinary skill in the art the passive energy saving system defined in applicant's claims.

The examiner also notes that applicant does not argue specifically against the modifications proposed by the examiner from the teachings of the secondary references of Cayce and Gaydos. Accordingly, it is considered admitted by applicant that these references teach that for which they have relied upon by the examiner.

Therefore, applicant's claims are not considered to patentably define over the prior art of record.

***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is (571) 272-4874. The examiner can normally be reached on weekdays from 8:00 AM to 5:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus, can be reached at (571) 272-4877. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Any questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

jcc  
April 29, 2005



JOSIAH COCKS  
PRIMARY EXAMINER  
ART UNIT 3749